



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,941	03/15/2004	Kunio Nobori	5077-034/DVA	1282
27572	7590	08/06/2009		
HARNES, DICKEY & PIERCE, P.L.C.			EXAMINER	
P.O. BOX 828			HALLENBECK-HUBER, JEREMIAH CHARLES	
BLOOMFIELD HILLS, MI 48303				
ART UNIT		PAPER NUMBER		
2621				
MAIL DATE		DELIVERY MODE		
08/06/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/800,941

**Applicant(s)**

NOBORI ET AL.

**Examiner**

JEREMIAH C. HUBER

**Art Unit**

2621

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/843,962.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)
- Paper No(s)/Mail Date 4/28/09
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/846952, filed on 4/27/2001.

***Terminal Disclaimer***

The terminal disclaimer filed on 9/26/2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent no. 7,161,616 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katta (EP 0949818 A2) in view of Karanovic (6058406)

In regard to claim 10 Katta discloses an image processor for receiving camera images taken with a plurality of cameras capturing the surroundings of a vehicle and

generating a synthesized image from the camera images (Katta generally Figs. 1-12 and pars. 42-61), the image processor comprising:

a parameter storage section for storing a plurality of sets of an image synthesis parameter group representing the correspondence between the camera images and the synthesized image and a filter parameter group corresponding to the image synthesis parameter group (Katta Fig. 3 and par. 47-48 note composition unit 14 generates a composite image such as the one shown in Fig. 4, further note pars. 49-50 the composite image is formed according to different parameters based on vehicle speed, particularly the images of the three backward facing cameras are composited according to different parameters depending on indication of high speed, low speed or backward operation);

a parameter selection section for selecting at least one among the plurality of sets of image synthesis parameter group and filter parameter group stored by the parameter storage section according to a motion of the vehicle detected by a vehicle motion detection section and an output of a vehicle status detection section for detecting the status of the vehicle such as an operation by a driver of the vehicle or whether or not an obstacle exists in the surroundings of the vehicle (Katta Figs. 3, 10, 11 and pars. 47-51 note par 51 control unit 15 indicates to the composition unit the parameters to be used by indicating operating mode e.g. high speed mode, low speed mode or touch screen selected, further note par. 51 selection can be made based on detected vehicle motion, e.g. high speed/low speed, or based on user operation e.g. touch panel selected image);

a filtering section for performing filtering of the camera images (Katta par.48 note images are enlarged or reduced for display also note par. 49 trapezoidal area is formed by enlarging and reducing image lines, further note par. 78 indicating that such size conversions may use a digital filter).

wherein the synthesized image is generated from the camera images filtered by the filtering section according to the image synthesis parameter group of the set selected by the parameter (Katta pars 47-51 note composition unit 14 generates a synthesized image according to the parameters provided by the control unit 15).

Katta discloses use of a digital filter as noted above. It is noted, however, that Katta does not provide details of the filtering performed in reducing or enlarging an image. However, Karanovic discloses that conventional image scaling includes a frequency band limiting filter (Karanovic generally cols. 1-2 particularly note col. 1 lines 52-65). Karanovic further discloses that parameters of such filters are selected based on the particular size of the image to be generated (Karanovic col. 1 line 65 to col. 2 line 52 note for general scaling the number of taps M to use and associated coefficient values depends on the scaling to be performed). It is therefore considered obvious that one of ordinary skill in the art would recognize the advantage of including conventional scaling with filtering according to selected parameters as taught by Karanovic in the invention of Katta in order to provide scaled images without aliasing as suggested by Karanovic (Karanovic col. 1 lines 58-64).

In regard to claim 11 refer to the statements made in the rejection of claim 10 above. Karanovic further discloses that during scaling the selected filter is applied to

each pixel of the image (Karanovic col. 1 lines 38-51 note during each pixel of an image is mapped to at least one pixel in another image thus each pixel must be filtered to prevent aliasing).

In regard to claim 12 refer to the statements made in the rejection of claims 10 and 11 above. Katta further discloses:

a plurality of cameras for capturing the surroundings of a vehicle (Katta Fig. 1 note cameras 2-6);

an image processing section (Katta Fig. 3 note 14 and 15); and

a display section for displaying the synthesized image generated by the image processing section (Katta Fig. 3 note touch panel display 13).

### ***Response to Arguments***

Applicant's arguments with respect to claims 10-12 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMIAH C. HUBER whose telephone number is (571)272-5248. The examiner can normally be reached on Mon-Fri 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeremiah C Huber  
Examiner  
Art Unit 2621

/Jeremiah C Huber/

Examiner, Art Unit 2621

/Dave Czekaj/

Primary Examiner, Art Unit 2621